

## BUCKWELL'S PATENT SCAFFOLDING.

We now bring before our readers the descriptive drawings of this scaffolding, to which we referred in No. 44.\*

The distinguishing merit of this scaffolding is its portability, so to speak, its simplicity and economy; its portable characteristics are in the small pieces of which it is constructed, battens  $\frac{5}{8}$ th or 1 $\frac{1}{2}$  inch thick and 15 feet long, or better still, slit deal boards, 1 inch thick by  $\frac{3}{4}$  or  $\frac{5}{8}$  inches wide; five of these boards set upright together and collared by the square iron straps form the posts, it being only necessary, in the case of the boards being 15 feet long, to cut a 5 feet length off one of them, which 5 feet piece being put in, forms a rest for the first ledger or cross rail; the 10 feet piece receives the next ledger, and by splicing upwards with the 15 feet lengths, similar bearings at every 5 feet (the usual distance of scaffold stages) are provided; thus a species of framework without panels is constructed of stiles and rails, the stiles being the posts of five battens conjoined, and the mortices in them being formed by the interval caused by the stile running through, resting upon the end of one batten and receiving the end of another batten on its upper edge; by portability, therefore, we mean that it consists of pieces easily handled and easily set and held

in their places, as we say in workman's phrase, there is no "two-handed work" about it, and in its portability, as thus described, and the way of putting together consists also its simplicity. As to economy, it will be self-evident. The boards are those which a builder will at least not later than commencing the building lay in as his stock for the flooring; they are put in a position (vertically) to be effectually seasoned, exposed to "wet and dry," and so that an evaporation of the sap and juices may go on, and by their being thus clamped or collared together, are preserved from dirt and grit; they require merely to be footed on a sole piece (a plank) and not let into the ground; the collars are not more costly, or so much so as so many ropes, and are greatly more durable, and being coated with zinc, do not rust or otherwise injure the boards, they are attached and secured without loss of time or difficulty, and even when done with, although from their nature and universal applicability it would be hard to say when this could be, they are of the value of old metal, and can be wrought up again for other uses.

The scaffolding is strong, and it is elastic, so to speak, in its strength; it is stronger than the same scantling of post in the solid, and as compared with uprights of squared timber, it has this advantage, that whereas a large knot in the one may occur, seriously to weaken it at one point of strain or contact, in the other, that is in Mr. Buckwell's scaffolding, no con-

junction of knots need be permitted, so that a weakness arising from this cause would not extend beyond the thickness of one board out of five.

The drawings Nos. 1 and 2 are elevations, face and sectional, of the scaffolding for a column or spire 300 feet high; at half the height a bearer is shown for the traveller, or setting frame, which may be used without prejudice to the completion of the scaffolding to its entire height at any elevation. Figs. 3 and 4 are plans of the scaffolding for column or spire, with iron angle ties.

Fig. 5 is an elevation, 6 a section, and 7 a plan for a scaffolding for a facade of masonry or brickwork, but for the latter it should be considerably slighter than shown.

Figs. 8, 9 are portions of the scaffolding to a larger scale, showing a standard or post formed of four boards, the number of boards and aggregate scantling made up by them being of course proportioned to the required strength of the scaffold.

Figs. 10, 11, 12, and 13 show the applicability of the scaffolding to closed buildings, by filling in with boards by way of panelling.

Mr. Buckwell calculates on the application of his plan with considerable advantage in the matter of erecting temporary stages or observatories for military or trigonometrical surveys; in many instances such a scaffolding could be run up, and to a great altitude, in a few hours.

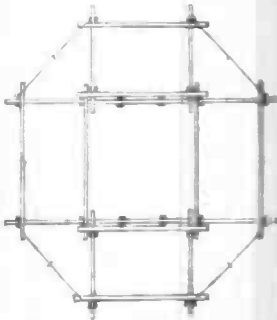


Fig. 3.

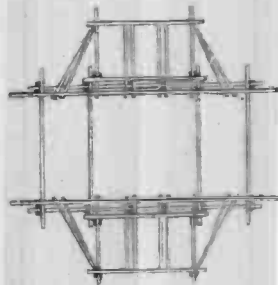
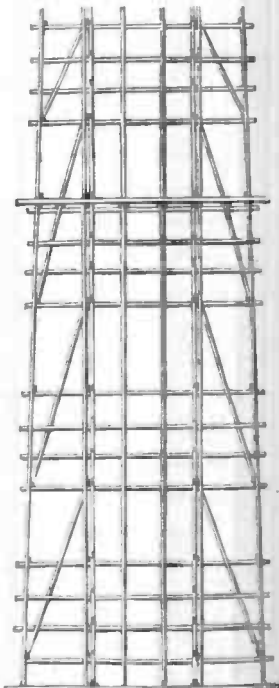
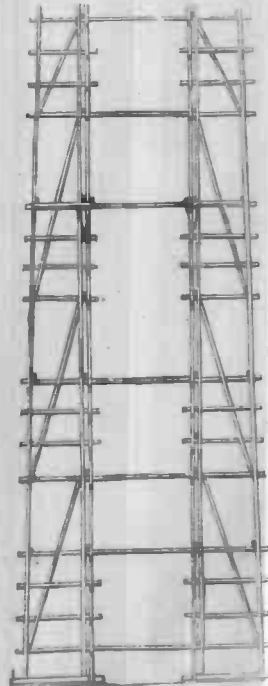


Fig. 4.



No. 1.



No. 2.